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Remarks

Claims 1 and 2 are pending in the subject application and currently stand rejected. Reconsideration and favorable consideration of the pending claims is respectfully requested in view of the following remarks.

Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over Huang-Lu et al. (U.S. Pat. App. No. 2001/0044191) in view of Hong et al. (U.S. Patent No. 5,614,746). Applicant respectfully traverses. A prima facie case of obviousness has not been presented. Three criteria must be met to establish prima facie case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations.

The Office Action acknowledges that Huang-Lu et al. fails to teach forming a first oxide layer on the substrate including the gate electrode and removing the nitride layer and first oxide layer on the surface of the substrate, but states, at page 5 that:

Hong teaches forming a first oxide layer on the substrate including the gate electrode (Hong teaches an oxide-nitride-oxide spacer, which is constructed by forming a first oxide layer, a nitride layer over the first oxide and a second oxide layer over the nitride layer to form a ONO layer 38, columns 5 and 6) and removing the nitride layer and the first oxide layer on the surface of the substrate (Figure 3E - The ONO layer is etched off the substrate to form the spacers).

However, Hong et al. fails to teach or suggest forming a first oxide layer on the substrate including the gate electrode, forming spacers on sidewalls of the gate electrode, and then removing the nitride layer and the first oxide layer on the surface of the substrate as specified in subject claim 1. Rather, the ONO spacer of Hong et al. is formed on a gate oxide layer (see Figs. 3D and 3E) and its first oxide layer and nitride layer are removed in a single etching process during forming spacers on sidewalls of the gate electrode. In particular, Hong et al. teaches at col. 6, lines 37-41 "FIG. 3E shows the device of FIG. 3D . . . [t]he sidewall spacers 38 are formed by an anisotropic etch back performed on integrate dielectric (ONO) layer 38." Therefore, contrary to what is claimed, Hong et al. teaches depositing a first oxide layer, a nitride layer, and a second oxide layer on a thin oxide layer, and then performing an anisotropic etch of the entire ONO layer to form an ONO spacer.

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The Office Action further indicates that it would be obvious to combine the ONO spacer of Hong et al. with the method of Huang-Lu et al. because a method is provided for fabricating a split gate flash EPROM device. However, if the cited references are combined as suggested in the Office Action, the claimed invention would not result. Hong et al. fails to teach or suggest forming spacers on sidewalls of the gate electrode separate from removing the nitride layer and the first oxide layer on the surface of the substrate such that forming a second preliminary source/drain region through a second ion implantation process using the spacers as a mask can occur without removing the nitride layer and the first oxide layer on the surface of the substrate.

As Huang-Lu et al. or Hong et al. alone, or in combination, do not teach or suggest all the claim limitations, a prima facie case of obviousness as not been presented. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the §103(a) rejection of claim 1.

Claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over Huang-Lu et al. (U.S. Pat. App. No. 2001/0044191) in view of Hong et al. (U.S. Patent No. 5,614,746) and further in view of Xiang et al. (U.S. Patent No. 6,555,439). Applicant respectfully traverses. As explained above, Huang-Lu does not disclose "forming a first oxide layer on the substrate including the gate electrode" and "removing the nitride layer and first oxide layer on the surface of the substrate." For reasons set forth above, Hong et al. fails to cure this deficiency. The tertiary reference, Xiang et al., also fails to cure the deficiencies of these references. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

In view of the foregoing, Applicant believes that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 or 1.17 as required by this paper to Deposit Account 19-0065.

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The Applicant invites the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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